



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/535,266	05/16/2005	Hiroshi Watanabe	MAT-8684US	3761
23122	7590	04/29/2009		
RATNERPRESTIA P.O. BOX 980 VALLEY FORGE, PA 19482			EXAMINER SCHATZ, CHRISTOPHER T	
			ART UNIT 1791	PAPER NUMBER
			MAIL DATE 04/29/2009	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/535,266

Applicant(s)

WATANABE, HIROSHI

Examiner

CHRISTOPHER SCHATZ

Art Unit

1791

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 January 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 13, 14 and 18 is/are pending in the application.
- 4a) Of the above claim(s) 18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 13 and 14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-8508)
Paper No(s)/Mail Date 4/9/09
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

FINAL REJECTION

Election/Restrictions

1. Newly submitted claim 18 is directed to an invention that is independent or distinct from the invention originally claimed for the following reasons:
2. Inventions II (claim 18, class 156, subclass 344) and I (claims 1, 13 and 14, class 156, subclass 60) are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because the combination does not require curing by heat and pressure. The subcombination has separate utility such as permanently bonding a plate to panel and not removing the plate from the panel.

The examiner has required restriction between combination and subcombination inventions. Where applicant elects a subcombination, and claims thereto are subsequently found allowable, any claim(s) depending from or otherwise requiring all the limitations of the allowable subcombination will be examined for patentability in accordance with 37 CFR 1.104. See MPEP § 821.04(a). Applicant is advised that if any claim presented in a continuation or divisional application is anticipated by, or includes all the limitations of, a claim that is allowable in the present application, such

claim may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claim 18 is withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kaneko et al. (JP-2002268577, previously cited) in view of Chung (6496373, previously cited), and further in view of Wei et al. (US 20020193035).

Kaneko et al. discloses a method of manufacturing a plasma display device having a panel in which a pair of substrates having transparency at least on a front side, the substrates being oppositely disposed so that discharge space and discharge cells are formed between the substrates, and a metallic holding plate 3 that supports the panel via a thermal conductive material (see the machine translation, [0002], [0006] and [0019]), said holding plate having outer edge; the method comprising: forming a pull-to-remove type adhesive 50, which are thermally conductive in order to allow heat to travel from the panel to the chassis; applying the adhesive to panel 1B and the holding plate 3 and bonding the panel to the holding plate together ([0023]). Kaneko et al. is silent as to

a method wherein the adhesive is cured by simultaneous application of heat and pressure. Chung teaches using a compressible and melt-flowable thermally conductive interface that is tacky and pressure sensitive in one embodiment in order to accommodate planarity tolerances between the substrates and is preferably cured under heat and pressure to reduce voids in the joint (abstract, col. 2 lines 12-13 and 20-24 and col. 6 lines 26-35). The use of a curable pressure sensitive adhesive would have additionally eliminated the need to clamp the components together. It would have been obvious to one of ordinary skill in the art at the time of invention to use the heat and pressure-curable pressure sensitive adhesive disclosed by Chung as the pull to remove type adhesive disclosed by Kaneko et al. in order to form a joint that accommodates planarity tolerances between the substrates and has a reduced number of voids as well as to eliminate the need for clamping the components together after assembly.

Kaneko and Change are silent as to the formation of a groove at a periphery of the holding plate into which the adhesive flows. Wei discloses a method of manufacturing a display device, said method comprising providing a pair of transparent substrates 200, 204, wherein a groove 206 is formed at the periphery of at least one of said substrates, such that an adhesive 208 flows into said groove (figures 4, 5, 7a-7c; paragraphs 10-12; 20-27). Wei further discloses that the groove is positioned between the adhesive and an outer edge of the substrate, and the groove accepts the flowed portion of the adhesive to prevent it from leaking to the outside of the substrate (paragraphs 20-27). It would have been obvious to one of ordinary skill in the art at the time the invention was made to form a groove at the periphery of Kaneko's holding plate

such that adhesive flows into the groove and does not leak to the outside of the holding plate in order to control the flow of the adhesive and as taught by Wei above.

Allowable Subject Matter

Claims 13 and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The reasons said claims constitute allowable subject matter can be found in section 8 of the office action dated July 31, 2007.

Response to Arguments

5. Applicant's arguments filed 4/9/2009 have been fully considered but they are not persuasive.

On page 5 of the remarks, the applicant argues that the invention is distinguished from the applied prior art because the instant invention is directed to a method wherein the plate is separated from the panel by pulling the adhesive from the groove which is filled with the adhesive. These arguments are not commensurate with the scope of the applicant's claim. The claim does not recite a limitation requiring the adhesive to be pulled out of the groove.

The applicant argues that because the adhesive tape of Kaneko is used as an adhesive and not cured by applying heat and pressure simultaneously, there is no need for a groove in the plate (chassis) of Kaneko. This argument amounts to an attack on Kaneko and Wei *without considering Chung*. Chung discloses why it would have been advantageous to apply heat and pressure to cure a pressure sensitive thermally

conductive adhesive when bonding two substrates. One of ordinary skill in the art in possession of Kaneko, Chung and Wei would have recognized the advantage of forming a groove for adhesive to flow into the method of Kaneko *as modified by Chung*.

The applicant argues that Kaneko cannot be combined with Chung because Chung discloses application of heat and pressure to create a strong and permanent bond. The method of Chung, the applicant argues is not for use with a pull-to-remove type adhesive. First, the examiner asserts that Kaneko is concerned with the strength of the bond between the plate and panel before the adhesive is removed (section 14). One of ordinary skill in the art would thus have been motivated to turn to Chung for guidance on how to improve the adhesive strength of a pressure sensitive thermally conductive adhesive. Second, even if Chung does disclose curing to form a permanent bond (something the examiner is not conceding), such a disclosure does not mean that Kaneko as modified by Chung would yield a method wherein the panel is permanently bonded to the plate of Kaneko. Rather, one of ordinary skill in the art would have recognized to cure the pull to remove adhesive of Kaneko without forming a permanent bond. Finally, the advantages of curing a pressure sensitive adhesive (see rejection above) disclosed by Chung would have been realized by Kaneko regardless of whether or not curing forms a permanent bond.

As to the applicant's arguments directed toward Wei, the examiner again asserts that the advantage of forming a groove into which adhesive flows (see rejection above) would have been realized by Kaneko as modified by Chung regardless of whether or not curing forms a permanent bond. The applicant fails to present a reason as why the

advantage of forming a groove applies only to a method where a permanent bond is formed.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **CHRISTOPHER SCHATZ** whose telephone number is 571-272-6038. The examiner can normally be reached on Monday through Friday 9 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/CHRISTOPHER SCHATZ/
Examiner, Art Unit 1791

/Richard Crispino/
Supervisory Patent Examiner, Art Unit 1791